Mid-tier User Managed (Primary and Secondary) Disk Storage

Product Summary

ITS offers shared, mid-tier user managed Primary fibre channel and Secondary SATA disk storage at the State's Salt Lake City data center. Storage space in this environment is available for use by government agencies that have co-located or dedicated servers in the Salt Lake City data center or have applications residing in one of ITS's shared hosting environments. In the future this service will be expanded to the Richfield data center. ITS offers Primary and Secondary Mid-Tier storage in both a SAN and a NAS environment.

The difference between SAN storage and NAS storage is that SAN storage is connected to the host via Fibre Channel Protocol (FCP) with data transfer rates up to 100 Mbps. SANs have proven extremely reliable and efficient for databases, applications, static web sites, etc.

NAS storage is directly connected to the network via Ethernet that typically has data transfer rates of up to 1Gbps. These environments have proven to be extremely reliable and efficient for applications, static web sites, etc.

Both environments offer storage solution benefits and opportunities that are extremely reliable and efficient.

Primary fibre channel disk storage is typically used to store business critical information that requires continuous availability, fast access to that data, the ability to handle large amounts of random I/O, and high availability of that data.

Secondary SATA storage is typically used for business *important* data, such as reference data, fixed content, backup data, etc., that needs to be online, but is only accessed periodically and can often have a lower performance and less than a 24X7 availability.

Description of Services

Mid-tier User Managed Disk Storage is provided to agencies on a Logical Unit Number (LUN) basis. Storage is allocated based on the size or amount of storage the customer feels is needed for their environment. The customer specifies the number of LUNs desired and the size of each LUN. LUNs can be configured in increments of 1GB. Connectivity to this storage is provided through high-speed Fibre Channel networks.

Product Benefits

Benefits
Fibre Channel Disk Storage
Fast performance with 10,000 rpm drives.
Up to 50,000 I/Os per second
Redundant, fault-tolerant hardware and RAID protection provide high availability for high-profile applications.
Support for a wide array of operating systems and hardware platforms i.e. Sun/Solaris, IBM AIX, HP/UX, WIN NT, WIN 2000, WIN 2003, Linux, Netware.
Physically secure, climate controlled environment.
24x7 monitoring.
Reliable uninterruptible power with battery backup and generator power.

146 Gb Hard Drives.

Full duplex that enables data to be transmitted and received at the same time.

Storage equipment resides in a level 3 data center with multi-level security access.

Benefits
SATA Disk Storage
Lower cost than FC disk.
7200 rpm disk drives
Faster and better performance than tape.
Redundant, fault-tolerant hardware and RAID protection provide high availability for high-profile applications.
Support for a wide array of operating systems and hardware platforms i.e Sun/Solaris, IBM AIX, HP/UX, WIN NT, WIN 2000, WIN 2003, Linux, Netware.
Physically secure, climate controlled environment.
24x7 monitoring.
256 Gb Hard Drives.
Reliable uninterruptible power with battery backup and generator power.
Half duplex that allows data to be either transmitted or received at one time.
Storage equipment resides in a level 3 data center with multi-level security access.

Services Not Included with this Product

Services Not Included	
Backup and Restore Services	Backup and restore services are sold separately.

Related ITS Products

Related ITS Products	
Tivoli Backup and Restore Services for Open Systems	Tivoli Backup and Restore Services for Open Systems is available to State agencies for Open Systems servers hosted in the Salt Lake City or Richfield Data Centers.

ITS Responsibilities

ITS Responsibilities
All storage hardware is maintained by ITS with full support by the hardware vendor.
ITS provides 24x7 monitoring of the storage environment.

Customer Responsibilities

Customer Responsibilities
Purchase of Host Buss Adaptors (HBAs) or Network Interface Cards (NIC) for servers attached to the Storage Area Network (SAN) or Network Attached Storage (NAS).

ITS Customer Support

Problem resolution by ITS staff, agency staff and vendors is managed and coordinated by the ITS Customer Support Center. The following parameters govern ITS efforts to resolve technical problems:

ITS Customer Support
Problem priority is based on defined criteria for the importance of the system affected, the severity of system degradation, and the number of affected users.
Problems can be submitted 24x7 by telephone or the Internet.
Internet submissions are monitored during business hours (M-F 7:30 a.m. to 5:30 p.m.).
Time to Initial Response targets for submitted problems are two business hours for low and medium priorities, one clock hour for high priorities, and thirty clock minutes for urgent priorities.
Total Time to Resolution targets for problems are twelve business hours for low priorities, ten business hours for medium priorities, six clock hours for high priorities, and two clock hours for urgent priorities.
Performance against Initial Response and Resolution targets is measured regularly.
Customer satisfaction is measured regularly.
Service outages are analyzed to determine root causes and to indicate future preventative measures.

System Requirements

Servers using this product must be connected to the SAN via a Host Bus Adaptor or the NAS via a Network Interface Card.

Product Rate

The State Rate Committee and the State Legislature have approved rates for this environment. The rate approved is:

Proposeed Rates for Mid-tier user managed (Fibre) Disk Storage
Primary Fibre Channel Disk Storage $.0035 per month/per MB
Secondary SATA Disk Storage $.0025 per month/per MB

Ordering the Product

Any government agency interested in purchasing mid-tier storage can fill out the on-line order form by going to: http://its.utah.gov/productsservices/datastorbackup/datastorbackup.htm and selecting mid-tier user managed storage or contact their assigned Customer Relationship Manager. The provisioning process includes these steps:

1. The customer agency fills out the on-line order form or contacts their CRM.
2. When submitted, the form is sent to ITS CRM's, storage administrators, and the ITS Help Desk.
3. The ITS Help Desk initiates a Remedy service request order that is sent to the storage administrators. This is to ensure that the customer's request is tracked and followed through.
4. The CRM works with the storage administrator and arranges for a needs assessment meeting between the customer agency and ITS if needed. In this meeting the amount of storage, time frames for completion, and other parameters for the project are established.
5. The customer agency provides approval to ITS to provision the required storage space.
6. ITS storage administrators provision the required disk space.
7. The agency and ITS coordinate efforts to connect the agency's servers to the provisioned space.
8. Service and billing begins.

Product Agreement

ITS and the Customer agree that this Product Description together with an approved Product Order Form constitute a binding agreement between both parties for the Product and related services required by the Customer. This Agreement remains in effect according to the terms specified in the Product Order Form.

Product and/or Service Rates listed are in accordance with the approved ITS Rate Schedules. Therefore, the product description and order form replaces all other documentation, i.e., Contracts, Special Billing Agreements (SBA), Service Level Agreements (SLA), Memorandums of Understanding (MOU), etc.

To the extent that the terms set forth above conflict with an existing Contract, Special Billing Agreement (SBA), Service Level Agreements (SLA), Memorandums of Understanding (MOU), or other agreement between ITS and the customer, the parties acknowledge that the foregoing shall supercede the earlier agreement.